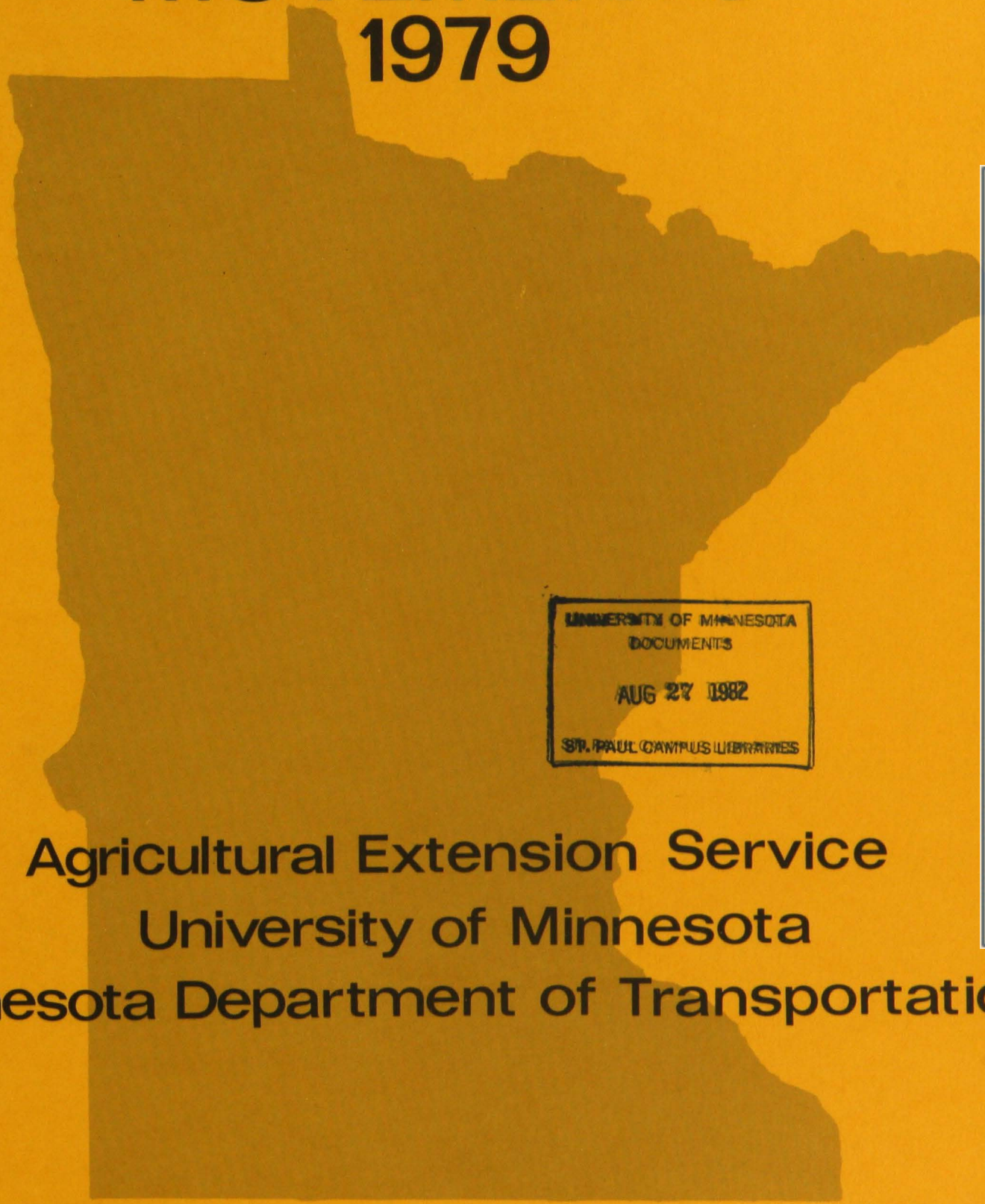
MINNESOTA SOYBEAN MOVEMENTS 1979



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MINNESOTA SOYBEAN MOVEMENTS

1979

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by

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INTRODUCTION

Soybeans are the most important oilseed crop produced in the United States. During the 70's, U.S. soybean production doubled from 1.1 billion bushels in 1970 to 2.26 billion bushels in 1979 (Figure 1). Soybean crushing and soybean exports also increased. Domestic crushing increased from 760 million bushels in 1970 to 1.1 billion in 1979. Exports nearly doubled from 434 million bushels in 1970 to 850 million bushels in 1979.

Minnesota is among the leading soybean producing states. In 1980, Minnesota was fourth behind Iowa, Illinois and Indiana. During the 70's, Minnesota soybean production increased every year except three. Minnesota soybean production more than doubled during the decade, increasing from 79 million bushels in 1970 to 163 million bushels in 1979. This increase in production has increased the demand for marketing and transportation services.

Historically, Minnesota soybeans have been shipped to either in-state processors or to river terminal elevators for transshipment via barge to the Gulf of Mexico. Trucks accounted for almost all of these shipments between country elevators and processors or river terminals because of the relatively short distance. Although the truck-to-processor and truck-barge movements remain dominant for soybeans, more and more Minnesota soybeans are being shipped directly from country elevators by rail to export elevators on the Gulf of Mexico, and (more recently in) the Pacific Northwest. This has been the direct result of lower unit-train rates and increased investment in unit-train loading facilities.

The investment in unit-train loading facilities has been dramatic. In 1974, there were 19 country subterminal elevators in Minnesota which could load 25 cars or more. In 1980, there were 55. Most of these facilities are located in southern Minnesota where corn and soybean production is greatest.

Other developments which have or will impact marketing patterns of soybeans include the passage of the "Staggers Rail Act of 1980" and increased waterway user fees. Major provisions of the Staggers Act relate to branch-line abandonment and railroad rate-making policy. The Act encourages railroad companies to abandon unprofitable lines. Minnesota, which has many such lines will lose additional lines.

The rate-making provisions include significant deregulation which allows railroad companies more freedom in raising and lowering rates. In addition, railroads can now enter into rate and service contracts with shippers. This ability to enter into contracts could place smaller shippers at a disadvantage to larger shippers who have more bargaining power with the railroads.

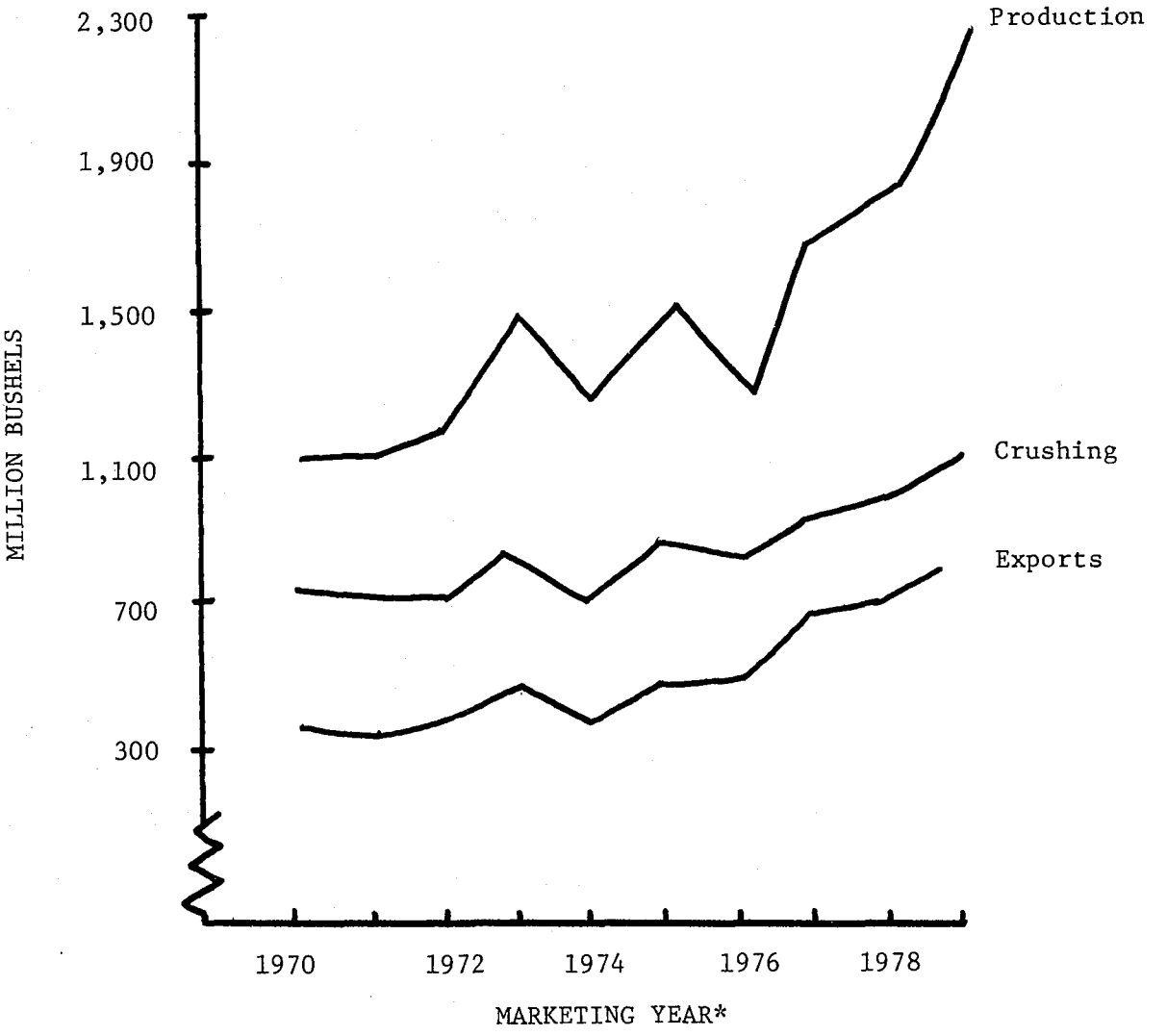
Several waterway user fee proposals may add as much as 20 cents per bushel to freight costs. Most of the added cost would be transferred back to producers in the form of lower prices. The increased cost of water transportation will also cause more direct rail shipments from interior points to export ports.

More extensive discussions of agricultural transportation problems facing Minnesota are available in the following Extension folders: Upper Midwest Transportation Issues for the 1980's, Extension Folder 556-1980, Jerry Fruin; Yesterday, Today, and Tomorrow: Railroads in Minnesota,

Extension Folder 624-1981, Jerry Fruin and Robert Lunt; The Railroad Problem in Minnesota, Extension Folder 515-Revised 1980, Jerry Fruin and Mike Alley.

FIGURE 1

SOYBEAN PRODUCTION, CRUSHING AND EXPORTS IN THE UNITED STATES (1970-1979)



Source: Fats and Oil Situation, ECSC, USDA.

*Beginning September 1

SOYBEAN MOVEMENTS INTO OR WITHIN MINNESOTA

Country elevators in Minnesota and neighboring states shipped an estimated 117 million bushels into or within Minnesota in 1979. The majority of the shipments (92% of total) were from Minnesota country elevators. Trucks accounted for 97 percent of the total shipments of soybeans to points within Minnesota.

Figure 2 shows country elevator soybean shipments to terminal elevators in the Twin Cities, Red Wing, and Winona. Minnesota country elevator shipments accounted for 94 percent of the 53 million bushels received. Truck shipments accounted for 95 percent of total receipts.

Figure 3 shows country elevator shipments to processors in Dawson, Mankato, and Savage and other country elevators. Few soybeans were shipped between country elevators. Minnesota country elevator shipments accounted for 93 percent of the 60 million bushels received by processors. Roughly 4.5 million bushels were received from country elevators in North and South Dakota and Iowa. Trucks accounted for essentially all of the shipments received by processors.

Lake terminals in Duluth/Superior received 3.4 million bushels. Railroads accounted for 43 percent of the shipments. Table 1 summarizes country elevator shipments into and within Minnesota to selected destinations.

Figure 2

1979 UPPER MIDWEST COUNTRY ELEVATOR SHIPMENTS TO TERMINAL ELEVATORS IN THE TWIN CITIES, RED WING AND WINONA

(1,000 bushels)

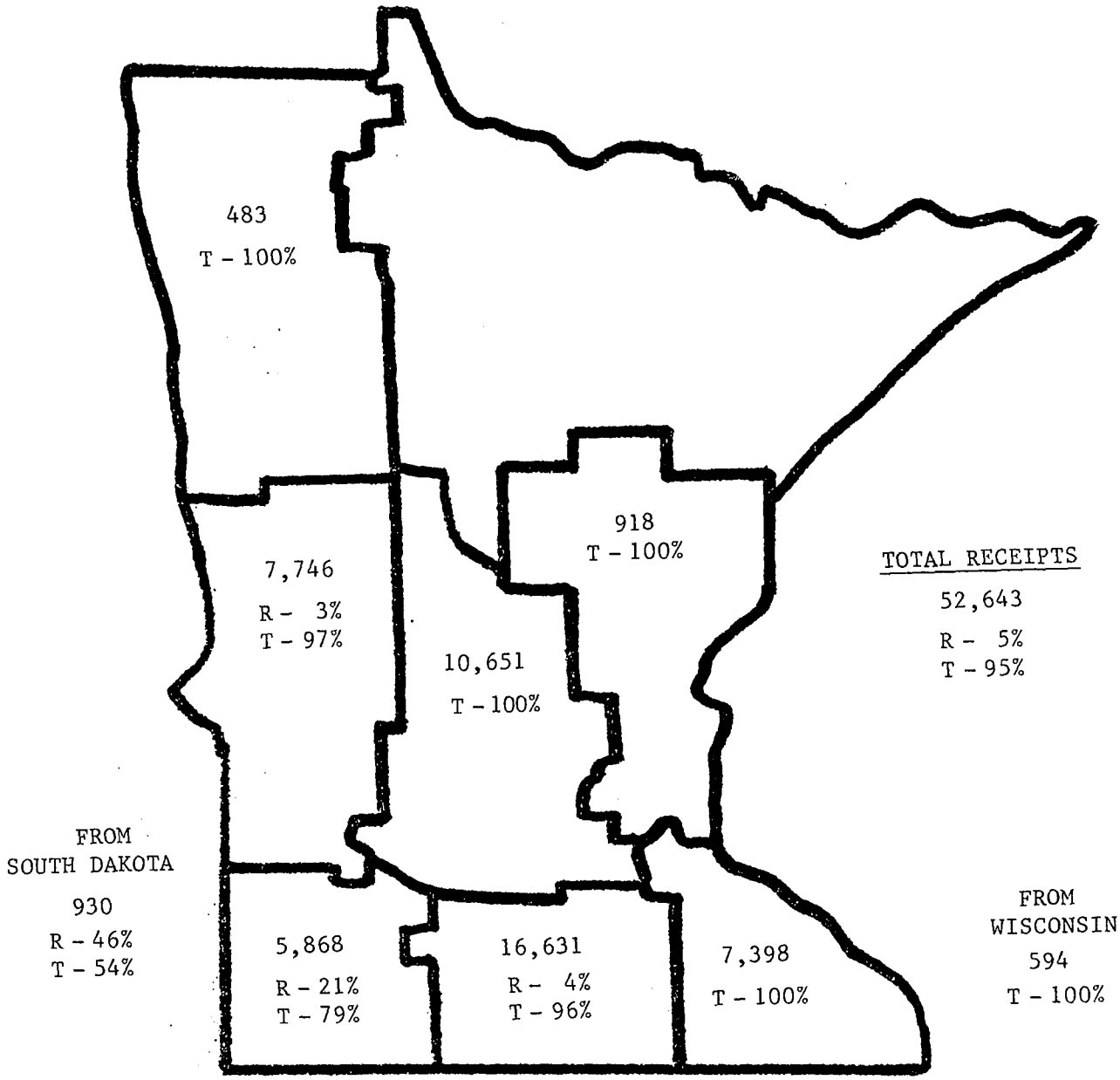


Figure 3

1979 UPPER MIDWEST COUNTRY ELEVATOR
SOYBEAN SHIPMENTS TO MINNESOTA SOYBEAN
PROCESSORS IN DAWSON, MANKATO AND SAVAGE

(1,000 bushels)

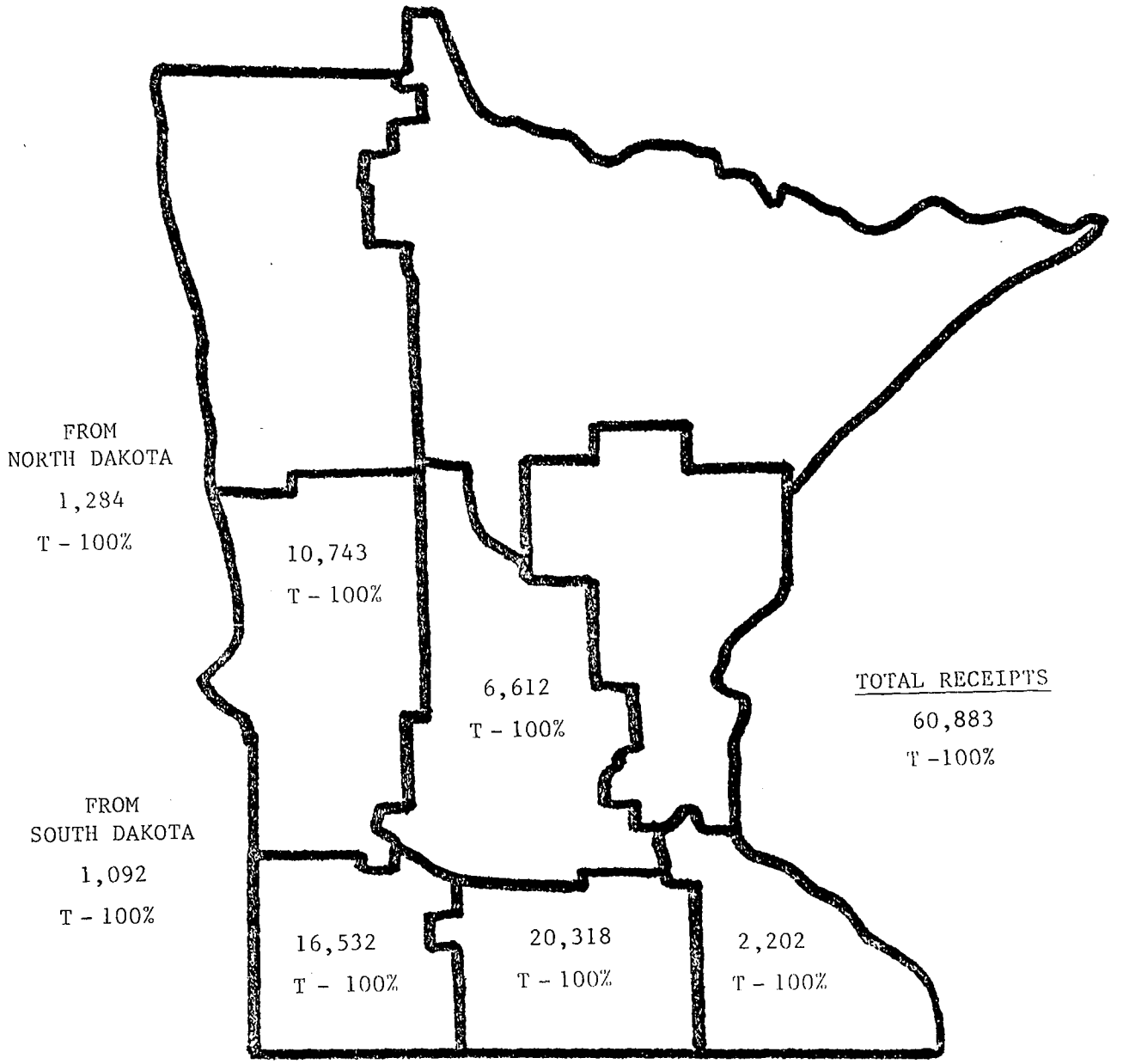


TABLE 1

1979 UPPER MIDWEST COUNTRY ELEVATOR
SOYBEAN SHIPMENTS TO MINNESOTA DESTINATIONS

(1,000 bushels)

Origin	Twin Cities[1] Red Wing, and Winona	Soybean Processors	Duluth/Superior	TOTAL	% RAIL	% TRUCK
Minnesota						
Northwest	483	--	--	483	0	100
North	--	--	--	--	-	--
West Central	7,746	10,743	1,163	19,652	3	97
Central	10,651	6,612	--	17,263	0	100
East Central	918	--	104	1,022	0	100
Southwest	5,868	16,532	70	22,470	6	94
South Central	16,631	20,318	--	36,949	2	98
Southeast	7,398	2,202	--	9,600	0	100
Sub Total	49,695	56,407	1,337	107,439	2	98
Out-of-State						
North Dakota	--	1,284	--	1,284	0	100
South Dakota	930	1,092	--	2,022	21	79
Iowa	1,424	2,100	--	3,524	0	100
Wisconsin	594	--	--	594	0	100
Unknown	--	--	2,021	2,021	45	55
Sub Total	2,948	4,476	2,021	9,445	14	86
TOTAL	52,643	60,883	3,358	116,884	3	97
% RAIL	5	0	43	3		
% TRUCK	95	100	57	97		

[1] Terminal elevators only.

SOYBEAN MOVEMENTS OUT OF MINNESOTA

An estimated 68 million bushels of soybeans were shipped out of Minnesota in 1979. This accounts for 9 percent of the total volume of grain and oilseeds shipped out of Minnesota in 1979 (Figure 4). Water modes of transportation accounted for 74 percent of the total soybean shipments out-of-state. Railroads accounted for 19 percent of the shipments. The major destinations were export ports at the Gulf of Mexico.

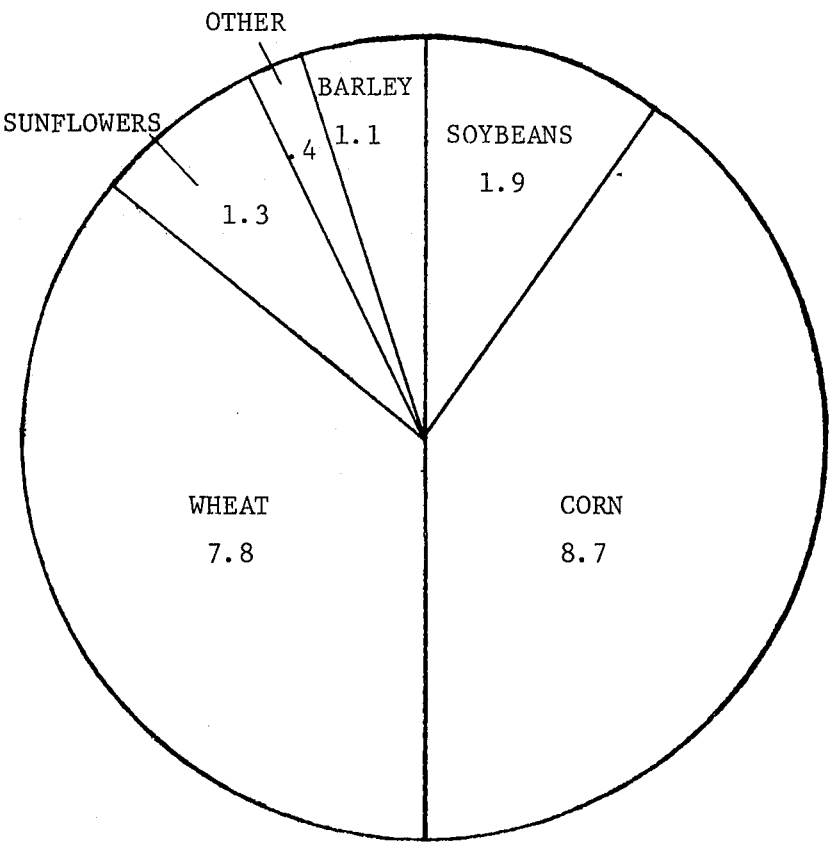
Country elevators accounted for 26 percent of the 68 million bushels shipped out-of-state. Figure 5 shows the destination of the 18 million bushels shipped directly from country elevator sites. Railroads accounted for 72 percent of total shipments from country elevators. The Gulf of Mexico was the major destination, receiving 12.8 million bushels. All of the shipments to the Gulf were from the Southwest and South Central Crop Reporting Districts (CRD's). The Southeast CRD accounted for all the shipments to Wisconsin.

River terminal elevators in the Twin Cities, Red Wing, Winona and lake terminal elevators in Duluth/Superior shipped an estimated 51 million bushels to out-of-state destinations. All of the shipments were by barge or vessel. Barge movements to ports at the Gulf for export were an estimated 48 million bushels. Only 2.6 million bushels were shipped from Duluth/Superior.

FIGURE 4

TOTAL MINNESOTA[1] SHIPMENTS TO
OUT-OF-STATE DESTINATIONS IN 1979

(million metric tons)



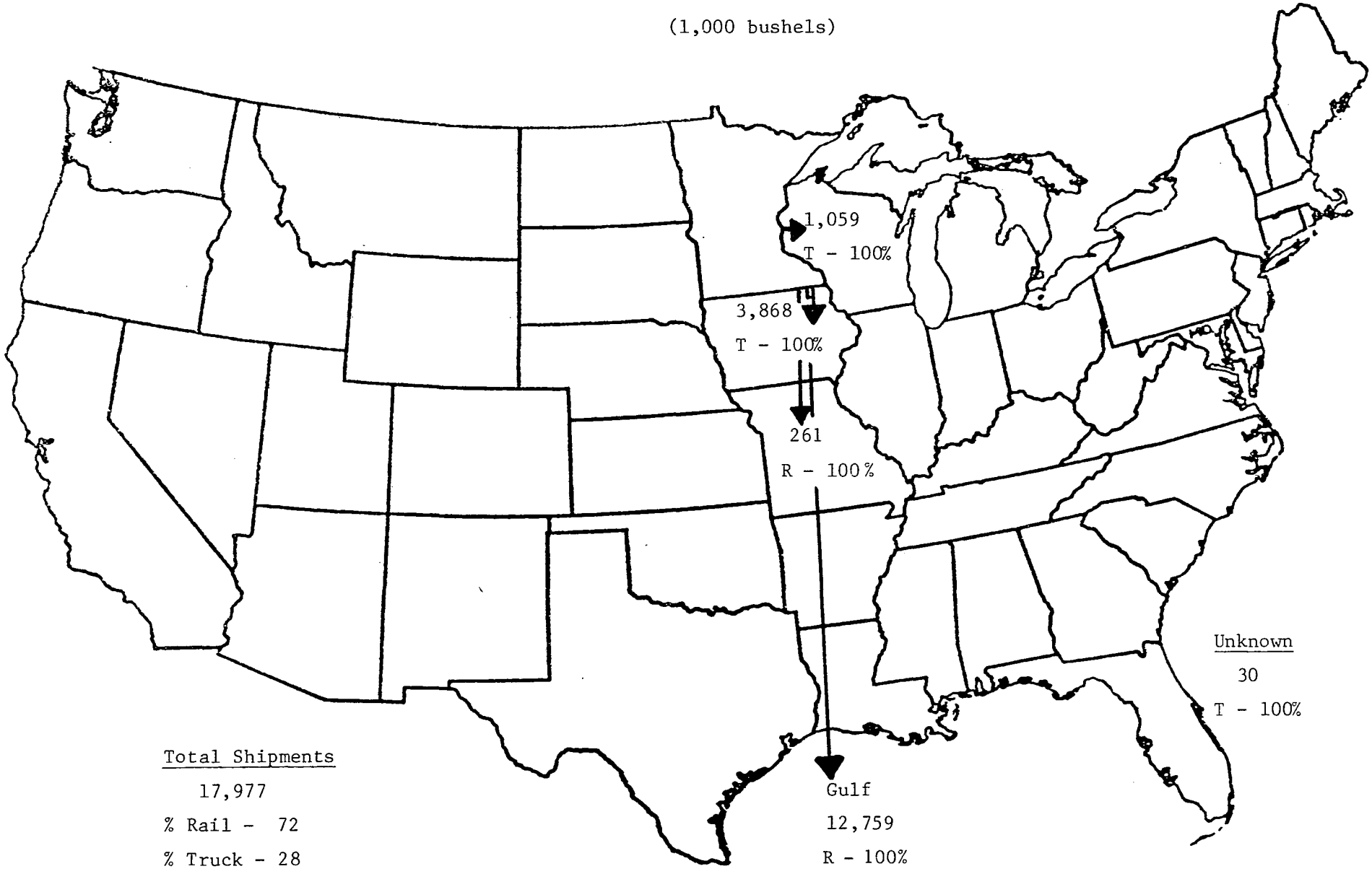
Total shipments: 21.2 million metric tons

[1] Includes shipments from terminal elevators and country elevators

FIGURE 5

1979 MINNESOTA COUNTRY ELEVATOR SOYBEAN SHIPMENTS TO OUT-OF-STATE DESTINATIONS

(1,000 bushels)



EXPORT DESTINATIONS

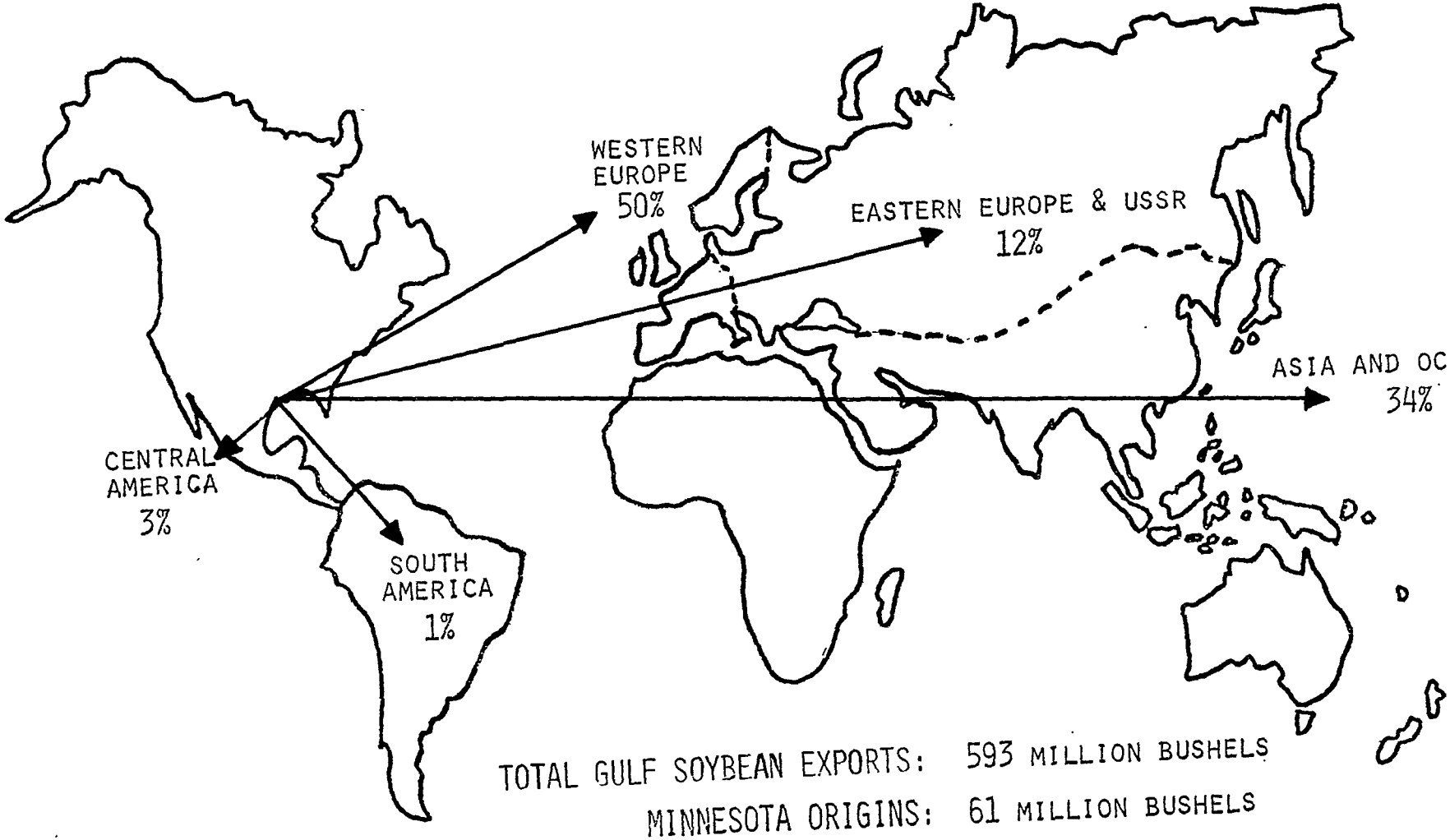
The United States exported 758 million bushels of soybeans in 1979. Deepwater ports at the Gulf accounted for 78 percent of these exports. Minnesota soybeans accounted for 8 percent (63 million bushels) of total U.S. soybean exports and 10 percent (61 million bushels) of exports from the Gulf. Because Minnesota soybeans shipped to deepwater ports are commingled in storage, it is not possible to trace the precise movement of Minnesota soybeans to the destination countries. However, grain inspection data published weekly by the USDA can be used to determine the general destination of Minnesota soybean exports.

Figure 6 shows the destination regions for soybean exports from ports at the Gulf of Mexico. The major destination of the 593 million bushels exported were Western Europe and Oceania. Major buyers include the Netherlands (141 million bushels), Japan (124 million bushels), and the USSR (59 million bushels). All of the soybean exports (2.6 million bushels) from Duluth/Superior in 1979 were to Western Europe.

FIGURE 6

SOYBEANS

1979 EXPORTS FROM GULF PORTS



TOTAL GULF SOYBEAN EXPORTS: 593 MILLION BUSHELS

MINNESOTA ORIGINS: 61 MILLION BUSHELS

SOURCE: USDA, INSPECTION FOR EXPORTS BY COASTAL AREAS AND COUNTRY OF DESTINATION.

IMPLICATIONS

Minnesota soybean movements in 1979 reveal the importance of in-state processors and river terminal elevators as markets for Minnesota soybean merchandizers. Roughly 45 percent of the 125 million bushels of soybeans shipped by Minnesota country elevators were to in-state processors. River terminal elevators in the Twin Cities, Red Wing and Winona received approximately 40 percent of the shipments.

Although truck transportation will continue to play the dominant role in the marketing of Minnesota soybeans, the 80's will see an increasing quantity of soybeans shipped by rail directly from country elevators to deepwater ports. Most of these shipments will be in unit trains. This trend will continue as country elevators realize and benefit from the additional marketing opportunities and flexibility created by direct rail access. The emerging trend is evident in the 1979 soybean movements. In 1979, Minnesota country elevators shipped an estimated 13.3 million bushels of soybeans by rail to deepwater ports at the Gulf of Mexico and Duluth/Superior, representing 21 percent of the total Minnesota soybeans shipped to these export markets.

All the transportation modes, truck, rail, and water, are important in marketing Minnesota soybeans. The marketing system has many problems in the transportation arena. These include serious financing problems for state and local roads, continued railroad abandonments, bankruptcies and consolidations, transportation deregulation, and increased waterway and port user charges.

It is important that these problems and trends be recognized and addressed by both the state and the private sector. Coordination and planning will be necessary to maintain the essential infrastructure required to market and move and export Minnesota soybeans throughout the decade. Minnesota agricultural prosperity will depend upon an adequate and flexible commodity transportation system.

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